

Appl. No. 09/505,830

Amdt. dated March 31, 2004

Reply to Office action of December 31, 2003

Amendments to the Claims:

Claims 1-5 (canceled)

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4  
Claims 6 (currently amended): An apparatus for providing a  
crypto key and an associated checkword of said crypto key to an  
encryption device for a telemeter system of a missile, said  
apparatus comprising:

5           a key loader having said crypto key and said associated  
6           checkword stored therein;

7           a microcontroller connected to said key loader to  
8           receive said crypto key and said associated checkword  
9           from said key loader, said microcontroller sending a  
10          first variable request signal to said key loader to  
11          effect a transfer of said crypto key and said  
12          associated checkword from said key loader to said  
13          microcontroller for storage within said  
14          microcontroller;


15          said microcontroller including an internal EEPROM for  
16          storing said crypto key and said associated checkword  
17          and a copy of said crypto key and said associated  
18          checkword;

19          said microcontroller being connected to said encryption  
20          device, said microcontroller sending a sense in signal

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21 to said encryption device to initiate a load of said  
22 crypto key and said associated checkword into said  
23 encryption device;  
24 said microcontroller receiving from said encryption  
25 device a second variable request signal, said  
26  microcontroller, responsive to said second variable  
27 request, loading said crypto key and said associated  
28 checkword into said encryption device; ~~and~~  
29 said microcontroller being connected to a transmitter  
30 for the telemeter system of said missile, said  
31 microcontroller providing a transmitter disable signal  
32 to said transmitter to disable said transmitter when  
33 said crypto key and said associated checkword are  
34 loaded into said encryption device preventing said  
35 crypto key and said associated checkword from being  
36 transmitted by said transmitter; and  
37 said microcontroller containing a computer software program  
38 for controlling, handling and interpreting said  
39 transfer of said crypto key and said associated  
40 checkword from said key loader to said microcontroller  
41 for storage within the internal EEPROM of said  
42 microcontroller, said computer software program

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43 controlling, handling and interpreting the storing of  
44 said crypto key and said associated checkword and said  
45 copy of said crypto key and said associated checkword  
46 within the internal EEPROM of said microcontroller,  
47 said computer software program controlling, handling  
48 and interpreting the loading of said crypto key and  
49 said associated checkword into said encryption device  
50 from the internal EEPROM of said encryption device, and  
51 said computer software program controlling, handling  
52 and interpreting a disabling of said transmitter when  
53 said crypto key and said associated checkword are  
54 loaded into said encryption device and an enabling of  
55 said transmitter after a successful load of said crypto  
56 key and said associated checkword into said encryption  
57 device.

1 Claim 7 (original). The apparatus of claim 6 wherein said  
2 microcontroller comprises an 8-bit Microcontroller.

Claim 8 (canceled)

1 Claim 9 (original): The apparatus of claim 6 further comprising a

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2 light emitting diode connected to said microcontroller, said  
3 light emitting diode displaying a status for a load of said  
4 crypto key and said associated checkword into said encryption  
5 device.

B5  
Claim 10 (canceled)

1 Claim 11 (currently amended): The apparatus of claim 10 further  
2 comprising a light emitting diode connected to said  
3 microcontroller, said light emitting diode displaying a status  
4 for an erase of said crypto key and said associated checkword and  
5 the copy of said crypto key and the associated checkword from the  
6 internal EEPROM of said microcontroller.

12 (canceled)

1 13 (currently amended). An apparatus for providing a crypto  
2 key and an associated checkword of said crypto key to an  
3 encryption device for a telemeter system of a missile, said  
4 apparatus comprising:  
5 a key loader having said crypto key and said associated  
6 checkword stored therein;

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7 an 8-bit microcontroller connected to said key loader to  
8 receive said crypto key and said associated checkword  
9 from said key loader, said 8-bit microcontroller  
10 sending a first variable request signal to said key  
11 loader to effect a transfer of said crypto key and said  
12 associated checkword from said key loader to said 8-bit  
13 microcontroller for storage within said 8-bit  
14 microcontroller;  
15 said 8-bit microcontroller including an internal EEPROM for  
16 storing said crypto key and said associated checkword  
17 and a copy of said crypto key and said associated  
18 checkword;  
19 said 8-bit microcontroller being connected to said  
20 encryption device, said 8-bit microcontroller sending a  
21 sense in signal to said encryption device to initiate a  
22 load of said crypto key and said associated checkword  
23 into said encryption device;  
24 said 8-bit microcontroller receiving from said encryption  
25 device a second variable request signal, said 8-bit  
26 microcontroller, responsive to said second variable  
27 request, loading said crypto key and said associated  
28 checkword into said encryption device;

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29           said 8-bit microcontroller being connected to a transmitter  
30           for the telemeter system of said missile, said 8-bit  
31           microcontroller providing a transmitter disable signal  
32           to said transmitter to disable said transmitter when  
33           said crypto key and said associated checkword are  
34           loaded into said encryption device preventing said  
35           crypto key and said associated checkword from being  
36           transmitted by said transmitter;

37           a first light emitting diode connected to said  
38           8-bit microcontroller, said first light emitting diode  
39           displaying a status for a load of said crypto key and  
40           said associated checkword into said encryption device;

41           said 8-bit microcontroller being connected to a missile  
42           interface within said missile to receive a launch  
43           signal from said missile interface upon a launch of  
44           said missile, said 8-bit microcontroller, responsive to  
45           said launch signal, erasing said crypto key and said  
46           associated checkword and the copy of said crypto key  
47           and said associated checkword from the internal EEPROM  
48           of said 8-bit microcontroller;

49           a second light emitting diode connected to said  
50           8-bit microcontroller, said second light emitting diode

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51 displaying a status for an erase of said crypto key and  
52 said associated checkword from said 8-bit  
53 microcontroller; and  
54 said 8-bit microcontroller containing a computer software  
55 program for controlling, handling and interpreting said  
56 transfer of said crypto key and said associated  
57 checkword from said key loader to said 8-bit  
58 microcontroller for storage within the internal EEPROM  
59 of said 8-bit microcontroller, said computer software  
60 program controlling, handling and interpreting the  
61 storing of said crypto key and said associated  
62 checkword and said copy of said crypto key and said  
63 associated checkword within the internal EEPROM of said  
64 8-bit microcontroller, said computer software program  
65 controlling, handling and interpreting the loading of  
66 said crypto key and said associated checkword into said  
67 encryption device from the internal EEPROM of said  
68 encryption device, said computer software program  
69 controlling, handling and interpreting a disabling of  
70 said transmitter when said crypto key and said  
71 associated checkword are loaded into said encryption  
72 device and an enabling of said transmitter after a

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73                    successful load of said crypto key and said associated  
74                    checkword into said encryption device, and said  
75                    computer software program controlling, handling and  
76                    interpreting the erasing of said crypto key and said  
77                    associated checkword and the copy of said crypto key  
78                    and the associated checkword from the internal EEPROM  
79                    of said 8-bit microcontroller.

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14-15 (canceled)

1                    16 (currently amended). The apparatus of claim 13 wherein  
2                    said 8-bit microcontroller is connected to a loader interface  
3                    within said missile to receive an erase signal from said loader  
4                    interface, said 8-bit microcontroller, responsive to said erase  
5                    signal, erasing said crypto key and said associated checkword and  
6                    the copy of said crypto key and the associated checkword from the  
7                    EEPROM of said 8-bit microcontroller.

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